REMARKS

Claims 1-9, 11-18, and 21-41 are pending in the application.

Claims 9, 11, 17, 18, 21-24, 31 and 35-41 are allowed.

The Examiner rejects claim 15 and 16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner rejects claim 15 under 35 U.S.C. § 102(b) as being anticipated by the acknowledged prior art of Figure 2 ("APA").

The Examiner rejects claims 15, 16, 29, and 30 under 35 U.S.C. § 102(b), as being anticipated by Klein, U.S. Patent No. 6,349,051, ("Klein").

The Examiner rejects claims 1, 4, 5, 12-14, 25, 26, and 32-34 under 35 U.S.C. § 103(a) as being unpatentable over Klein in view of the APA.

Applicants amend claims 2, 4, 6, 12, and 29, and cancel claim 1.

Claims 2-9, 11-18, and 21-41 remain in the application.

Applicants add no new matter and request reconsideration.

Claims Allowed

Applicants thank Examiner Dang for the allowance of claims 9, 11, 17, 18, 21-24, 31 and 35-41.

Claim Rejections – 35 U.S.C. § 112

The Examiner rejects claims 15 and 16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regards as their invention. Applicants respectfully traverse the Examiner's rejection.

The Examiner alleges on pages 8-10 of the present Office Action that the Applicants agree with the Examiner "that the originally filed specification only discloses 'the memory controller embeds, within its address/command signals, information that identifies the memory unit, device, or rank selected for a particular read or write operation.'" The Applicants, however, did not acknowledge, nor actually agree with the Examiner's assertion. The Applicants cited and respectfully directed the Examiner to multiple other sections of the specification and their corresponding Figures in their Response to Final Action, filed Jan. 28, 2005 that show description other than as suggested by the Examiner. See, e.g., paragraphs beginning on page 8, line 23, page 9, line 7, and page 12, line 18, and Figures 4, 5, and 7.

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Claim 15 recites *an address/command generator to generate address and command signals for multiple memory units, including READ command signals, wherein the READ command signals identify, to each memory unit, which memory unit of the multiple memory units is to perform a data read operation.*

The Examiner alleges the recited *the READ command signals* are unclear in view of the specification, in particular how they *identify, to each memory unit,* which memory unit of the multiple memory units is to perform a data read operation. Applicants respectfully direct the Examiner to specific portions of specification, when read with their corresponding Figures, clearly render claims 15 and 16 definite. See, e.g., paragraphs beginning on page 8, line 23, page 9, line 7, and page 12, line 18, and Figures 4, 5, and 7.

For instance, the specification defines READ*n* commands embedded with "information that identifies the memory unit, device, or rank selected for a particular read ... operation. ... Thus for the third of six ranks, READ2 would correspond to a read of that rank." Specification, page 8, line 23 – page 9, line 11. Since "[a]ll six ranks would decode the READ2 command and report a corresponding device state to their respective termination control logic," the READ2 command identifies, *to all of the memory ranks*, that the third rank is to perform the read operation. Specification, page 8, line 23 – page 9, line 11; Figures 4-7. In other words, since each READ*n* command uniquely identifies a different memory unit to perform a read operation and all of the memory units receive and decode the READ*n* commands to determine their embedded identification, the recited READ command signals clearly *identify, to each memory unit,* which memory unit of the multiple memory units is to perform a data read operation. Accordingly, Applicants request that in view of the above references of the specification that the rejection be withdrawn.

Claim Rejections – 35 U.S.C. § 102 and § 103

The Examiner rejects claim 15 under 35 U.S.C. § 102(b) as being anticipated by APA. The Examiner rejects claims 15, 16, 29, and 30 under 35 U.S.C. § 102(b), as being anticipated by Klein. The Examiner rejects claims 1, 4, 5, 12-14, 25, 26, and 32-34 under 35 U.S.C. § 103(a) as being unpatentable over Klein in view of APA. Applicants respectfully traverse the Examiner's rejections.

Claim 15 recites *the READ command signals identify, to each memory unit, which memory unit of the multiple memory units is to perform a data read operation.*

Claim 25 recites *the memory controller indicating on the command/address bus, when issuing a read or write command to one of the memory units, which memory unit is the target*

of the command, each memory unit decoding the issued read or write command and *wherein said read or write command indicates the target of the command.*

The Examiner alleges the APA's command signals disclose the recited READ command signals. The APA, however, discloses identifying the memory unit to perform the read operation using a chip select signal, not a command signal as the claim requires. See Specification, page 2, lines 5-8 (where the memory unit selected by an asserted chip select signal performs the read operation, while the memory units not receiving the chip select signal remain idle). The APA further does not provide the chip select signals to the idle memory units, and thus the APA does not perform the recited identification *to each memory unit.* In other words, the APA does not teach or suggest providing any signal to the memory units remaining idle during a read operation that identifies which memory unit is performing the read operation.

Nothing in Klein cures this deficiency, as Klein discloses selectively decoupling idle memory modules from a shared data bus without identifying to the decoupled memory modules, in a command signal, the memory module that is to perform a read operation. In other words, Klein provides no knowledge to an idle memory module about which other memory module is to perform the read operation, other than the idle memory module is not to perform the read operation. The Examiner further alleges that Klein's address signals "identify which memory module 35 is to be accessed." The claims, however, require the recited *READ command signals*, not address signals, *identify which memory unit of the multiple memory units is to perform a data read operation.* The APA and Klein therefore does not anticipate claim 15, or claim 25, and their corresponding dependent claims.

Amended claim 4 recites *wherein each memory unit comprises a programmable configuration register to configure the termination control logic according to stored termination control parameters, the memory controller having a termination configuration mode for transmitting termination control parameters to each of the memory units separate from the decoded commands for storage in that unit's configuration register.* Amended claims 12 and 26 recite similar limitations.

Amended claim 29 recites *transferring a register value to a termination parameter register in a memory unit served by a data bus, ... where the memory unit is operable to receive a command separate from the register value which satisfies one or more of the state conditions indicated by the register value.*

Applicants have amended claims 4, 12, and 29 to clarify that the recited register values and termination control parameters are separate and distinct from the recited

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commands. According to the Examiner, Klein's control bits disclose the recited register values and termination control parameters, and Klein's control signals 68 disclose the recited commands. From the Examiner's remarks on pages 6 and 10 of the present Office Action, it appears that the Examiner and Applicants are in substantial agreement that the claims as amended are novel and unobvious since they clearly exclude the ability of Klein to provide the control bits within its control signals 68. The Examiner further alleges Klein's state decoder 78 discloses the recited termination control logic. Klein, however does not teach or suggest configuring the state decoder 78, much less configuring the state decoder 78 according to the recited termination control parameters. Accordingly, Klein does not anticipate claim 4, or claims 12, and 29, or their corresponding dependent claims.
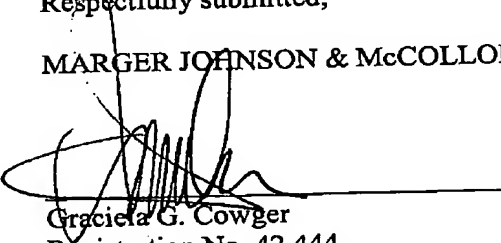
CONCLUSION

For the foregoing reasons, the Applicants request reconsideration and allowance of all claims as amended. The Applicants encourage the Examiner to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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I hereby certify that this correspondence is being transmitted to the U.S. Patent and Trademark Office via facsimile number (703) 872-9306, on May 16, 2005.

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